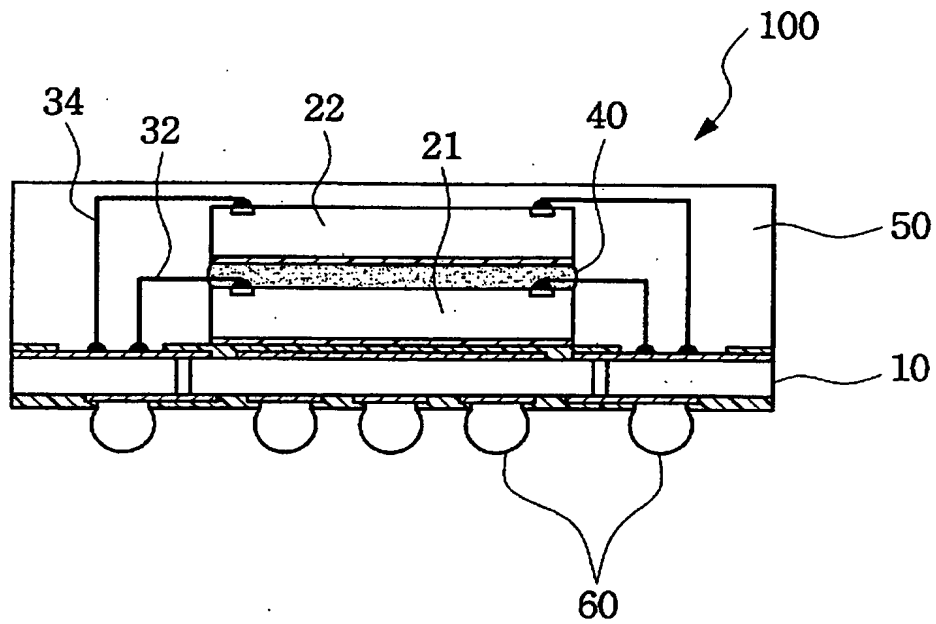


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**FIG. 1**  
( Prior Art )



**FIG. 2**  
( Prior Art )

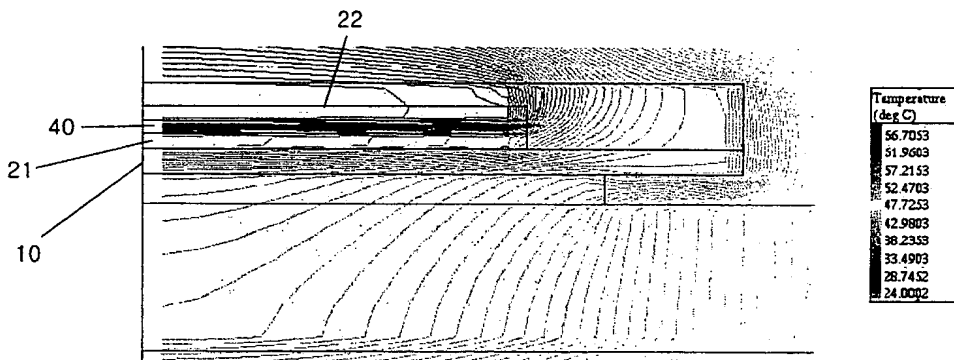


Diagram illustrating a plan view of a semiconductor device 200. The device includes a central region 110. Within this region, there is a central column of five square elements 121, which are connected to a horizontal line 111a. On either side of this central column, there are two columns of five rectangular elements 123, which are connected to a horizontal line 111. The entire structure is enclosed within a rectangular frame 110. Arrows 4 and 5 indicate directions.

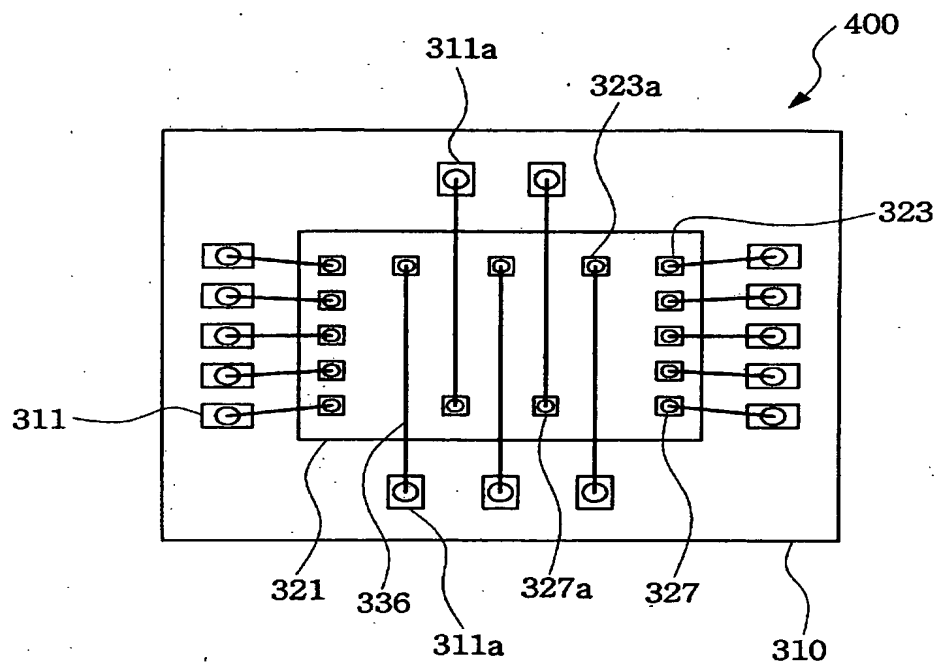
A cross-sectional view of a semiconductor device 200. The device features a substrate 110 with a top layer 111 and a bottom layer 112. A central region 114 contains a patterned layer 115. A top layer 116 is positioned above the central region. A top layer 118 is located above the top layer 116. A top layer 119 is positioned above the top layer 118. A top layer 120 is located above the top layer 119. A top layer 121 is positioned above the top layer 120. A top layer 122 is located above the top layer 121. A top layer 123 is positioned above the top layer 122. A top layer 124 is located above the top layer 123. A top layer 125 is positioned above the top layer 124. A top layer 126 is located above the top layer 125. A top layer 127 is positioned above the top layer 126. A top layer 128 is located above the top layer 127. A top layer 129 is positioned above the top layer 128. A top layer 130 is located above the top layer 129. A top layer 131 is positioned above the top layer 130. A top layer 132 is located above the top layer 131. A top layer 133 is positioned above the top layer 132. A top layer 134 is located above the top layer 133. A top layer 135 is positioned above the top layer 134. A top layer 136 is located above the top layer 135. A top layer 137 is positioned above the top layer 136. A top layer 138 is located above the top layer 137. A top layer 139 is positioned above the top layer 138. A top layer 140 is located above the top layer 139. A top layer 141 is positioned above the top layer 140. A top layer 142 is located above the top layer 141. A top layer 143 is positioned above the top layer 142. A top layer 144 is located above the top layer 143. A top layer 145 is positioned above the top layer 144. A top layer 146 is located above the top layer 145. A top layer 147 is positioned above the top layer 146. A top layer 148 is located above the top layer 147. A top layer 149 is positioned above the top layer 148. A top layer 150 is located above the top layer 149. A top layer 151 is positioned above the top layer 150. A top layer 152 is located above the top layer 151. A top layer 153 is positioned above the top layer 152. A top layer 154 is located above the top layer 153. A top layer 155 is positioned above the top layer 154. A top layer 156 is located above the top layer 155. A top layer 157 is positioned above the top layer 156. A top layer 158 is located above the top layer 157. A top layer 159 is positioned above the top layer 158. A top layer 160 is located above the top layer 159. A top layer 161 is positioned above the top layer 160. A top layer 162 is located above the top layer 161. A top layer 163 is positioned above the top layer 162. A top layer 164 is located above the top layer 163. A top layer 165 is positioned above the top layer 164. A top layer 166 is located above the top layer 165. A top layer 167 is positioned above the top layer 166. A top layer 168 is located above the top layer 167. A top layer 169 is positioned above the top layer 168. A top layer 170 is located above the top layer 169. A top layer 171 is positioned above the top layer 170. A top layer 172 is located above the top layer 171. A top layer 173 is positioned above the top layer 172. A top layer 174 is located above the top layer 173. A top layer 175 is positioned above the top layer 174. A top layer 176 is located above the top layer 175. A top layer 177 is positioned above the top layer 176. A top layer 178 is located above the top layer 177. A top layer 179 is positioned above the top layer 178. A top layer 180 is located above the top layer 179. A top layer 181 is positioned above the top layer 180. A top layer 182 is located above the top layer 181. A top layer 183 is positioned above the top layer 182. A top layer 184 is located above the top layer 183. A top layer 185 is positioned above the top layer 184. A top layer 186 is located above the top layer 185. A top layer 187 is positioned above the top layer 186. A top layer 188 is located above the top layer 187. A top layer 189 is positioned above the top layer 188. A top layer 190 is located above the top layer 189. A top layer 191 is positioned above the top layer 190. A top layer 192 is located above the top layer 191. A top layer 193 is positioned above the top layer 192. A top layer 194 is located above the top layer 193. A top layer 195 is positioned above the top layer 194. A top layer 196 is located above the top layer 195. A top layer 197 is positioned above the top layer 196. A top layer 198 is located above the top layer 197. A top layer 199 is positioned above the top layer 198. A top layer 200 is located above the top layer 199.

[illegible]

Diagram of a multi-layer printed circuit board 300. The board consists of a central core 221, which is a rectangular block containing a grid of vias 223. The core is surrounded by prepreg layers 210 and 211. Conductive paste 232 is applied to the prepreg layers, and conductive paste 236 is applied to the vias. The diagram shows the internal structure of the board with various layers and components labeled.

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**FIG. 7**



**FIG. 8**

